IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Robert J. Fite	Examiner:	Y. J. Han
Serial No.:	09/476,219	Group Art Unit:	2838
Filed:	December 30, 1999	Docket:	884.182US1
Title:	NON-LINEAR ADAPTIVE VOLTAGE POSITIONING FOR DC-DC CONVERTERS		

RESPONSE TO NOTICE OF NON-COMPLIANT AMENDMENT (37 CFR 1.121)

Commissioner for Patents
Washington, D.C. 20231

Applicant has reviewed the Notice of Non-Compliant Amendment (37 C.F.R. 1.121) mailed on March 7, 2002. This response is accompanied by a Petition, as well as the appropriate fee, to obtain a one-month extension of the period for responding to the Office action, thereby moving the deadline for response from May 7, 2002 to June 7, 2002.

Applicant submits that the amendment and response as submitted did contain marked-up versions of amended paragraphs, and was in compliance with 37 C.F.R. 1.121. Nevertheless, applicant has here reproduced the marked-up paragraphs, along with instructions for insertion of the marked-up paragraphs into the specification.

On page 3, line 24, on the next line after the text "Figure 5 shows.....consistent with an embodiment of the present invention.", please insert the following three paragraphs:

Figure 6 is a block diagram that illustrates a DC-DC converter, consistent with an embodiment of the present invention.

Figure 7 is a flowchart that illustrates a method of providing a voltage from a DC-DC converter that varies dependent on the current drawn from the DC-DC converter, consistent with an embodiment of the present invention.

Figure 8 is a flowchart that illustrates a method of providing a voltage from a DC-DC converter that varies dependent on the current drawn from the DC-DC converter, consistent with an embodiment of the present invention.

On page 7, line 24, starting on a new line after the text "...level and the maximum current load level.", please insert the paragraphs:

Figure 6 illustrates in block diagram form the structure of one embodiment of the present invention. A DC-DC converter 601 comprises a sense module 602, operable to sense a current drawn from the DC-DC converter. The DC-DC converter module 601 is also operable via a voltage adjustment module 603 to adjust the voltage provided from the DC-DC converter such that the voltage is at a maximum current voltage level when the current drawn is at a maximum load current level and the voltage is at a minimum current voltage level when the current drawn is at a minimum load current level. The voltage adjusting is implemented in various embodiments of the invention in software executing on a processor, or in hardware. In further embodiments of the invention, the DC-DC converter module is operable to supply a substantially linear voltage response with respect to current drawn between the maximum load current level and the minimum load current level. The minimum load current level is selected in some embodiments of the invention to be the minimum current drawn by a load device having a minimum current draw of greater than no current.

Figure 7 is a flowchart that broadly illustrates an exemplary method consistent with the present invention. At 701, the current drawn from a DC-DC converter is sensed. At 702, the DC-DC converter's provided voltage is adjusted such that the voltage is at a maximum current voltage level when the current drawn is at a maximum load current level, and the voltage is at a minimum current voltage level when the current drawn is at a minimum load current level.

Figure 8 is a flowchart that illustrates a more detailed method of adaptive voltage positioning in a DC-DC converter, consistent with an embodiment of the present invention. At 801, the current drawn from the DC-DC converter is sensed. At 802, the sensed current is converted into a voltage signal indicating the sensed current. At 803, the voltage signal that indicates the sensed current is adjusted so that the voltage signal is at a maximum voltage level when the current drawn is at a minimum but nonzero load current, and the voltage signal is at a minimum voltage level when the current drawn is at a maximum load current level. At 804, the adjusted voltage signal is added to the voltage provided by the DC-DC converter.

If necessary, additional fees may be charged to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, Washington, D.C. 20231, on this 6 day of June, 2002.

Jane E. Brockschink
Name

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Signature